Building Local Capacity to Protect and Restore Hine's Emerald Dragonfly Habitat in Northeast Michigan: **Semi-Annual Performance Report 2**

Grant # F13AC00991

April 1, 2014 – September 30, 2014

Project summary:

We will train and work with local stakeholders to conduct surveys for the federally endangered Hine's emerald dragonfly (HED) while simultaneously mapping locations of invasive plants at four known Hine's emerald dragonfly sites in Alcona, Alpena, and Presque Isle counties. Small invasive plant infestations encountered will be treated during surveys to minimize follow-up efforts and the highest priority larger infestations will identified for future treatment. This project will build local capacity to protect and restore HED habitat in this region.

Goals and Objectives

1. Extend current USFWS permit through duration of project.

The current permit for which Dave Cuthrell is a sub-permitee runs through 12/31/2014. Dr. Cashatt who holds the permit will be applying for an extension as it gets closer to the 12/31 deadline.

2. Recruit volunteers from the community and local schools and provide workshops for the local community.

- A workshop was provided on June 12, 2014 at Alcona Township Hall to 30 community members and potential volunteers. We provided an overview of the project and discussed the Hine's emerald dragonfly and other unique plants and animals at Negwegon State Park and the threat posed by invasive species. Presenters included: Daria Hyde and Phyllis Higman - MNFI, Christie Deloria-USFWS, Sue Keller- Friends of Negwegon, Claire Wood, Amanda Zwagerman, Gina Zarini and Josh Ryan -Huron Pines.
- We collaborated with Sue Keller, Friends of Negwegon, Eric Ostrander, DNR Parks and Brandon Schroeder, MSUE Sea Grant to promote the project in the community and to recruit volunteers. Sue submitted press releases and was interviewed by local media. Eric coordinated communication with potential volunteers for scheduled trainings and provided logistical support for the trainings. Brandon coordinated with an 8th grade teacher in Alcona Schools and made arrangements to have her classes participate in the project. He also invited a 4H leader to bring her students to the training and to participate in the surveys.

3 & 4. Train State Park and Huron Pines staff /volunteers to i.d rare species and invasive plants.

- A 3 hour training workshop was provided on August 4, 2014 to 25 people at Negwegon State Park, including 2 State Park staff and again on September 22 to 15 people at Negwegon State Park. Participants were provided with identification cards depicting 4 rare animals (including the Hine's emerald dragonfly), eastern massasauga, piping plover and pitcher's thistle which occur or have potential to occur at Negwegon State Park. Information about the life history of these plants and animals was discussed and everyone had the opportunity to see Pitcher's thistle plants and a Lake Huron locust. Participants were also provided with identification cards depicting 10 invasive plants and were shown 9 of these plants in the field so they could identify key characteristics. In addition participants were trained in the standard protocol for mapping and recording invasive points using "drop down" menus on hand held tablets and paper forms to be used with Garmin GPS devices.

5. Conduct surveys for HED and invasive species at Misery Bay, North Point Rd., Negwegon S.P. and Thompson's Harbor.

- We focused our survey efforts at Negwegon State Park during the first year of the project to make the best use of project resources and to test the survey methodology at one location.
- Surveys were conducted by volunteers, State park staff, Americorp volunteers from Huron Pines and MNFI staff during the week of August 4-9, 2014 and September 22-26, 2014 at Negwegon State Park.
    - 188 volunteer hours were provided by 24 volunteers during August
    - 437 volunteer hours were provided by 79 volunteers during September
    - Locations of 23 areas with potential HED habitat were mapped
    - Locations of 3 rare plants were mapped (Pitcher's thistle)
    - Locations of 2 rare animals were mapped (Lake Huron Locust)
    - A total of 232 occurrences of invasive species were mapped (see attached table)

6. Treat occurrences of invasive plants which occur in areas <1 acre during surveys.

A total of 160 occurrences of 6 different species of invasive plants which occur in areas <1 acre were treated by Huron Pines Americorp staff during the surveys in August and September. These include:

- 145 occurrences of glossy buckthorn
- 9 occurrences of Japanese barberry
- 3 occurrences of reed canary grass
- Individual occurrences of Canada thistle, Eurasian swamp thistle and narrow-leaved cattail.

7. Conduct larval surveys in potential habitat

- 23 locations of potential Hine's emerald dragonfly habitat were mapped.
- 77 burrows were flagged
- 15 burrows were pumped

8. Report project results to State Parks and USFWS.

- A copy of this progress report has been provided to State Parks as well as USFWS.

9. Provide GPS locations of invasive plants > 1 acre to DNR Parks and Recreation Division and Huron Pines

- GPS locations of all invasive plants were provided to DNR Parks and Recreation Division as well as Huron Pines. These locations were sorted into categories of 1) treated and 2) flagged but not treated. Areas > 1 acre were not treated and larger trees were flagged but not treated as they need to be cut and then have the stump treated as this is more effective than just a foliar spray with herbicide. Large trees near the main parking lot were cut by DNR Parks staff and the stumps were treated by Huron Pines Americorp staff.

10. Report project results to the community and develop a plan with local leaders to continue EDRR efforts

We will provide project results to the community and develop a plan to continue EDRR efforts when the project is completed.

APPENDIX

Data collected on Hine's emerald dragonfly habitat: August/September 2014

Potential HED Habitat	Burrows
23 locations	77 (pumped 15)

Data collected on invasive plants during August/September 2014

Species	Treated	Untreated	Total Mapped
Bull thistle		1	1
Canada thistle	1		1
Eurasian swamp thistle	1		1
Glossy buckthorn	145	32	177
Hybrid cattail		3	
Japanese barberry	9	6	15
Narrow leaved cattail	1	4	5
Invasive phragmites		4	4
Reed canary grass	3	14	17
Spotted knapweed		8	8
	160	**72**	**232**